Western Region Newsletter

February 2011

National Weather Service

In This Issue:

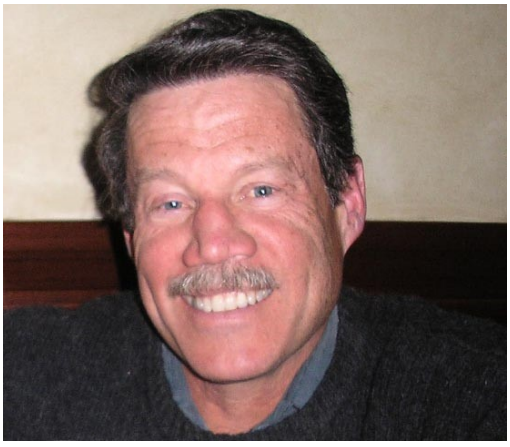
Regional Director's Message

I recently attended the AMS Annual Meeting in Seattle, Washington. There were about 3500 attendees including scientists from around the world. The days were packed with scientific presentations and discussions covering numerous topics that touched every aspect of the National Weather Service. Topics included; updates and enhancements to modeling and key systems like AWIPS II, decision support services underway in Western and Alaska regions, hydrology (specifically flooding in the Pacific Northwest and Tennessee), aviation weather and impacts on the air traffic system (San Francisco stratus and fog problem), NWS strategic plan for 2020, NOAA climate services and communicating climate change information, partner meetings and our respective roles in social media and mobile technology. The future is exciting and it will be fun to watch as we evolve our forecast and warning services over the next decade and beyond to better help our communities and to carry out our mission.

Vickie

Dave Reynolds Becomes an AMS Fellow

Please join me in congratulating Dave Reynolds who was recently named a Fellow of the American Meteorological Society (AMS) at the 91st AMS Annual Meeting held in Seattle, WA. To be eligible for AMS Fellowship nominees shall have made outstanding contributions to the atmospheric or related oceanic or hydrologic sciences or their applications during a substantial period of years. Only two-tenths of one percent of members are approved as Fellow each year. Congratulations Dave on this well deserved honor!



Featured Decision Support

WFO Pendleton has done some innovative support for their customers through their webpage. Their Decision Support Web Page is worth highlighting.

Image 1: The Grande Ronde Valley is highlighted for strong winds in the extended period.

Image 2: You can then drill down to the county level (Union County) and get the actual wind forecast using Google Maps. The popup gives you the forecast at a user selectable gridpoint.

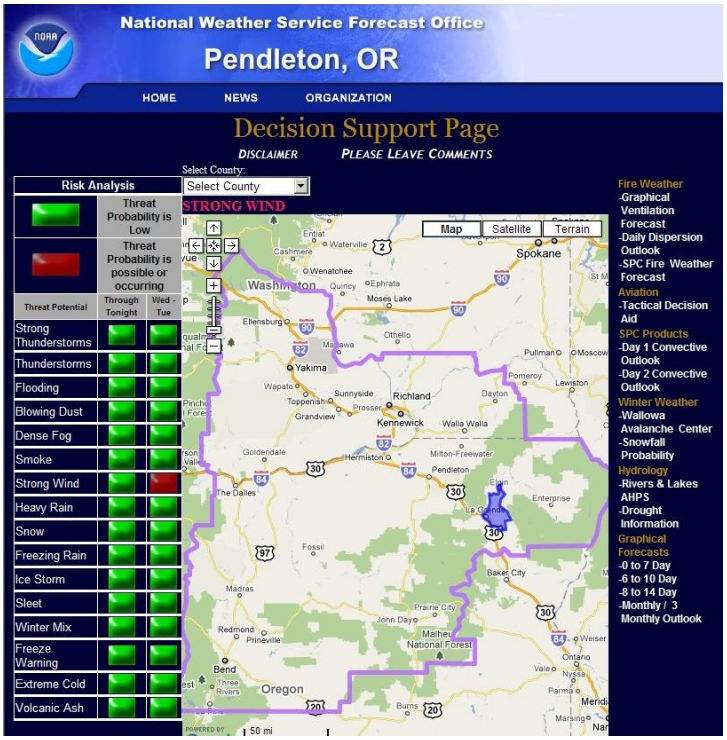


Image 1

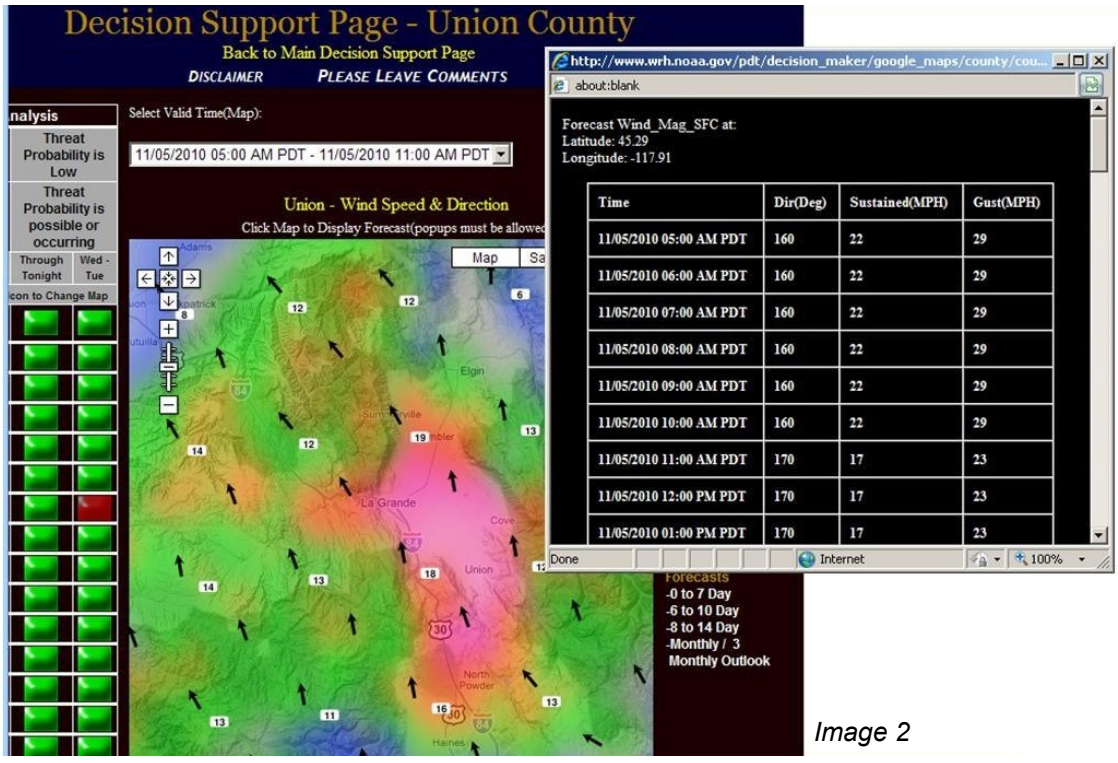
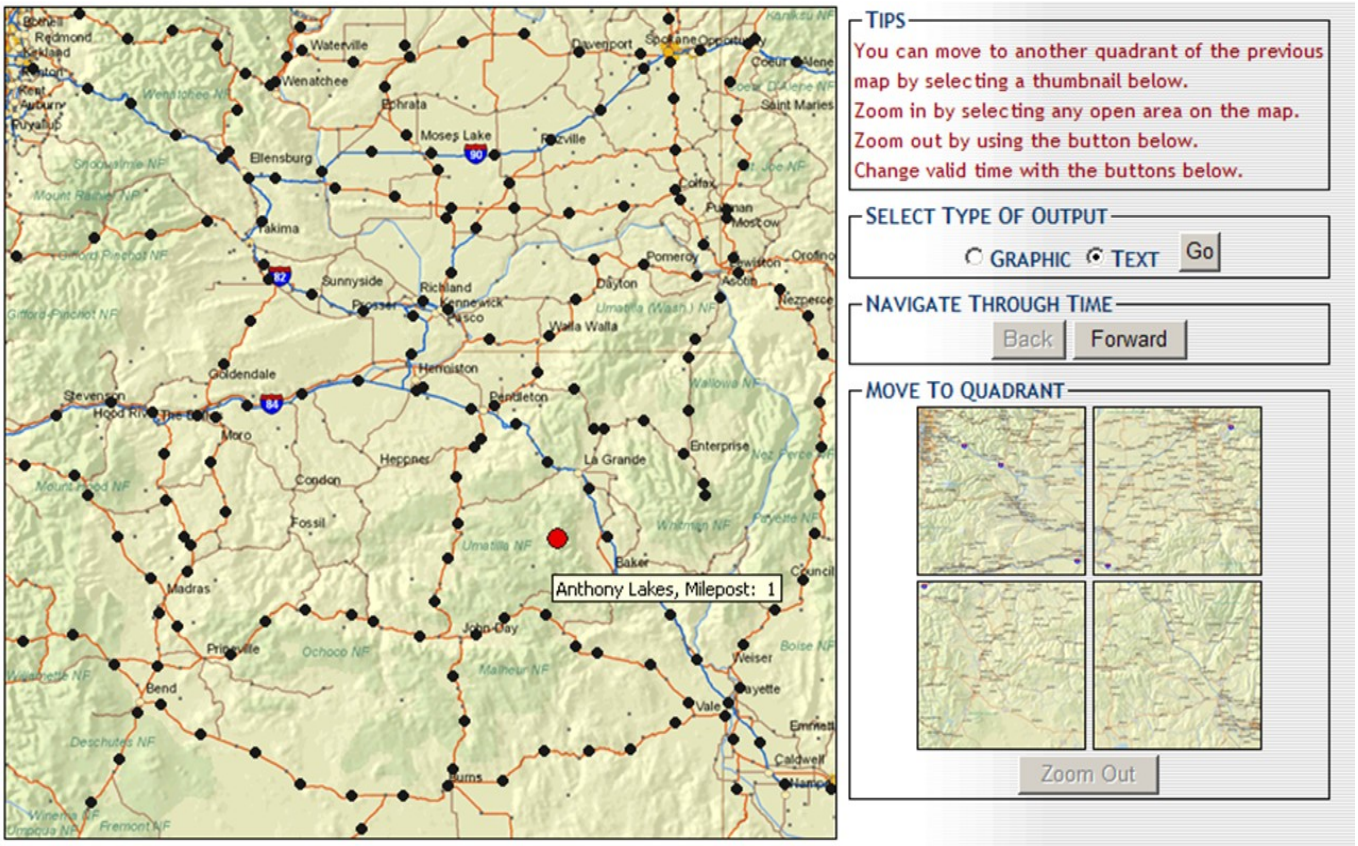


Image 2

WFO Pendleton recently met with the staff from the Wallowa Avalanche Center to review decision support services over the past year and how WFO PDT could provide DSS this year. The Center Director indicated that the milepost forecasts that WFO PDT is providing for the Aneroid Mountain and Mount Howard Snotels have been "absolutely critical to the avalanche center" for preparing their weekly avalanche reports. The center is expanding their service into the Anthony Lakes Ski Resort area and requested a new "milepost" forecast be added at the top of the lift hill. The locally produced scripts allow for much more exact latitude/longitude pairs while the national programs are subject to significant rounding errors due to 5 km resolution. The milepost forecasts for all three sites are available to the general public.



CURRENTLY SELECTED MILEPOST

Anthony Lakes | Milepost: 1 | Latitude: 44.961000 | Longitude: -118.245

Valid Date	29													30										
Valid Time	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM
Sfc Temp	17	19	20	19	17	15	14	14	16	16	16	16	17	18	18	19	19	19	19	18	18	19	20	21
Sfc Dew Point	12	11	11	11	12	12	12	12	14	13	11	11	11	13	13	13	14	14	14	15	17	18	19	20
Sfc RH	80	72	69	72	80	87	90	91	90	87	82	79	78	79	79	77	82	82	82	89	95	96	95	94
Wind Dir	W	W	W	W	W	SW	SW	SW	SW	SW	SW	S	S	S	S	S	S	S	S	S	S	S	S	S
Wind Spd	3	3	7	7	7	10	10	10	10	10	10	15	15	15	15	15	15	16	16	16	16	16	16	20
Wind Gust	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	29	29	29	29	29	31
Sky Cover	65	65	65	65	65	90	90	90	90	90	90	92	92	92	92	92	92	96	96	96	96	96	96	100
PoP	5%	5%	5%	5%	5%	14%	14%	14%	14%	14%	14%	35%	35%	35%	35%	35%	35%	85%	85%	85%	85%	85%	85%	87%
Weather	-	-	-	-	-	-	-	-	-	-	-	S-	S-	S-	S-	S-	S-	S-	S-	S-	S-	S-	S-	S-
Precip Amt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	T	T	T	T	T	T	0.02	0.02	0.02	0.02	0.02	0.02	0.03
Snow Level	2388	2388	2388	2388	2388	4398	4398	4398	4398	4398	4398	4721	4721	4721	4721	4721	4721	4720	4720	4720	4720	4720	4720	5008
Snow Amt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T	T	T	T	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Cooperative Observer Receives the John Campanius Holm Award

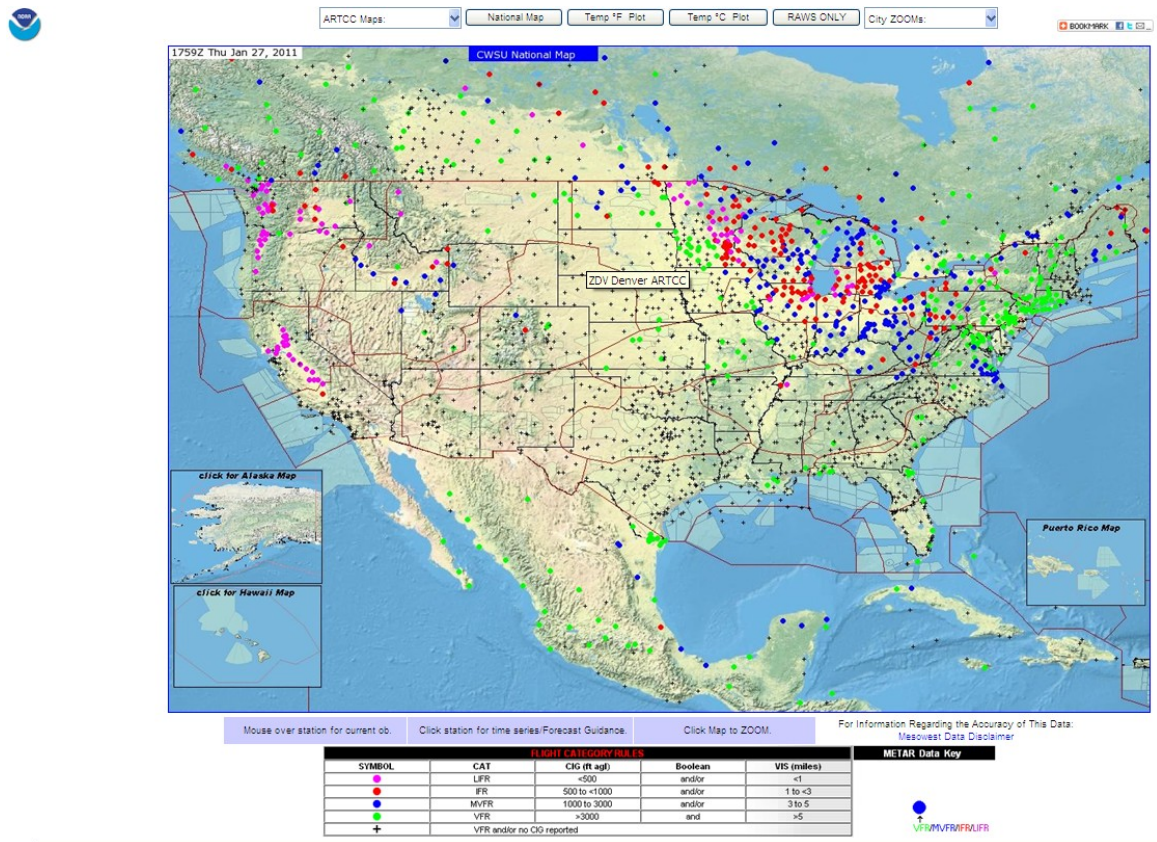
The exceptional achievements of volunteer cooperative observer Frank Christina of Mt. Shasta City, CA were recognized by representatives from WFO Medford, the California-Nevada River Forecast Center, and the California Department of Water Resources. He was presented with a 25 year service award and the prestigious John Campanius Holm award. Only 25 out of more than 10,000 cooperative observers receive the John Campanius Holm award each year. This award honors outstanding accomplishments in the field of meteorological observations. Mr. Christina has proven his dedication through accurate, consistent, and reliable observations over the years. His community relies upon his information through the local newspaper, and he is considered a climate expert for his area. In early 2010, his daily observations during a snowstorm helped the county receive assistance as part of a federal disaster declaration. Mr. Christina shows great pride in his work and it is a model of excellence.

WFO Medford MIC John Lovegrove presents the John Campanius Holm award to Frank Christina

NOAA Aircraft "Gonzo" Visits WFO Great Falls

NOAA Aircraft Meteorologist, Jessica Williams, WFO Great Falls MIC, Michael Mercer, and WCM Ben Schott

The NOAA research aircraft "Gonzo" came through Great Falls on its way to the western Pacific, via Alaska. The aircraft drops "sondes" to help improve model data in the data poor portions of the Pacific during the winter to help with winter storm forecasting. The aircraft meteorologists believe their data improves winter storm forecasting by about 15 to 20 percent. In the summer and fall they plunge into Hurricanes in the Atlantic.



CWSUs on the Map

With web traffic reaching over 4 million hits per month, there is no doubt that the CWSUs are on the map, literally. Oakland CWSU MIC, Ken Venzke, has developed a National TAF/METAR map webpage (www.wrh.noaa.gov/zoa/mwmap3.php?map=usa).Tooled from the WR Mesowest maps and geared for aviation, a plethora of data is available for any reporting location: METARs, TAFs, PIREPs, buoys, RAWs, NWS forecast, sunrise/sunset times and more.

Recent improvements added many missing available airport AWOS/ASOSs, including dozens of oil platforms in the Gulf of Mexico. National temperature plots are now available in Celsius, as well, since many of the users of the website are from Canada.

The FAA Safety Briefing, a national publication sent to every FAA facility and available for purchase subscription from the U.S. Government Bookstore, made mention of this map in the November/December 2010 and the January/February 2011 issues. See page 31 at http://www.faa.gov/news/safety_briefing/2011/media/JanFeb2011.pdf.

The map was also highlighted in a recent issue of the General Aviation News. This has created a lot of interest and positive feedback. Here is one example:

This is a great page, thanks for providing it!! I see you have linked Alaska, Puerto Rico, Hawaii which is great. It would be nice if you could include all of Eastern Canada that is missing with the exception of a portion of New Brunswick, Canada!!

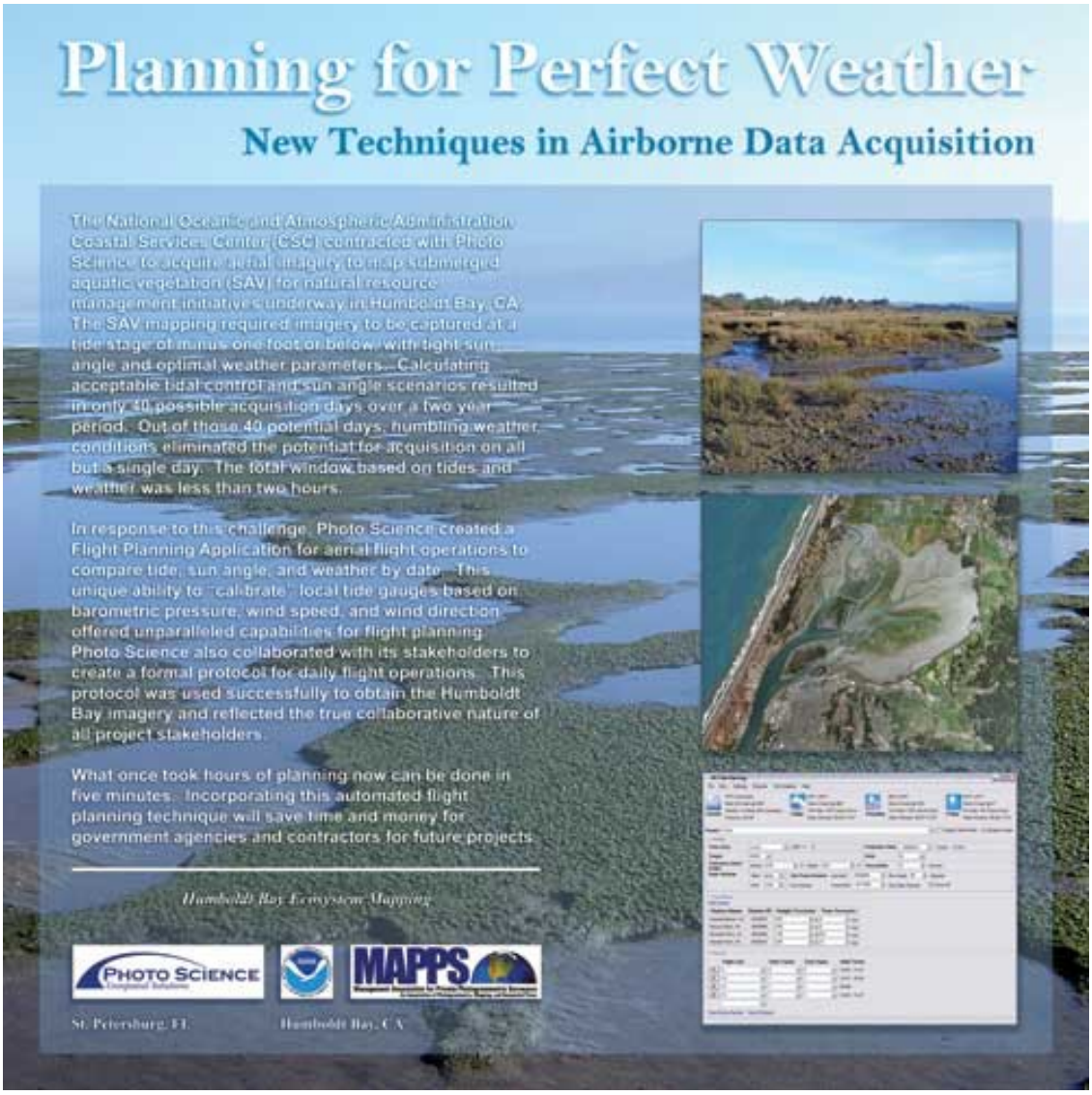
Again, this is a great page and you should be congratulated!!

WFO Eureka Helps Win Photo Award

Between 2007 and 2009, WFO Eureka provided weather forecast support for a NOAA Coastal Services Project that required a 48 hour forecast for completely clear skies at sunrise in the summer. This project was successfully completed after 3 years and the contract company, Photo Science, that conducted the project, was awarded the Geospatial Excellence Award at the Fall Management Associations of Private Photogrammetric Surveyors (MAPPS).

Humboldt Bay is located along the northern California coast. It is the only deep water port in northern California and is the second largest natural estuary in the state (http://www.humboldtbay.org/). Several natural resource management initiatives are taking place in the region. In an effort to support these initiatives, NOAA's Coastal Services Center (CSC) contracted with Photo Science to determine the availability of benthic habitat data in Humboldt Bay and to acquire new data if necessary.

The Humboldt Bay project presented extremely complex challenges for Photo Science, not only necessitating the development of a new flight planning application (now being evaluated as a national model), but also requiring them to execute all acquisition within an extremely thin one-day window.



Regional FET Meeting

During the week of January 11, 2010, WR Systems Operations Division (SOD) held a Facilities Engineering Technician meeting at Western Region Headquarters. The topics covered during this meeting were EMRS, facilities goals and monitoring, budget, safety and environmental compliance, SOW training, procurement, WR facilities expectations, and facilities issues and concerns. The next Facilities meeting is scheduled for August in Reno, Nevada.

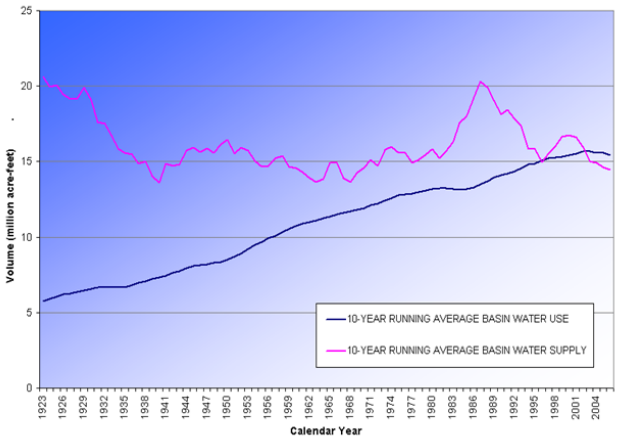
Pictured (l to r): Randy Miller (Salt Lake City, UT), Dan Clark (Portland, OR), Jim Chaisson (Great Falls, MT), Jim MacLellan (Hanford, CA), Vickie Nadolski (WR Director), Dean Rackham (Salt Lake City, UT), Mike Belarde (Spokane, WA), Mike Sullivan (Flagstaff, AZ), Joe Lachacz (WR Electronic and Facilities Branch Chief), Mark Tew (WR Deputy Director).

Probabilistic Forecasts from the CBRFC

Water from the Colorado River supplies 25 million people in seven states and two countries with drinking and municipal water and irrigates some 3.5 million acres of farmland. As population and other demands have grown in recent decades, the long term water demand has exceeded water supply. The drought in the early 2000s exacerbated the problem.

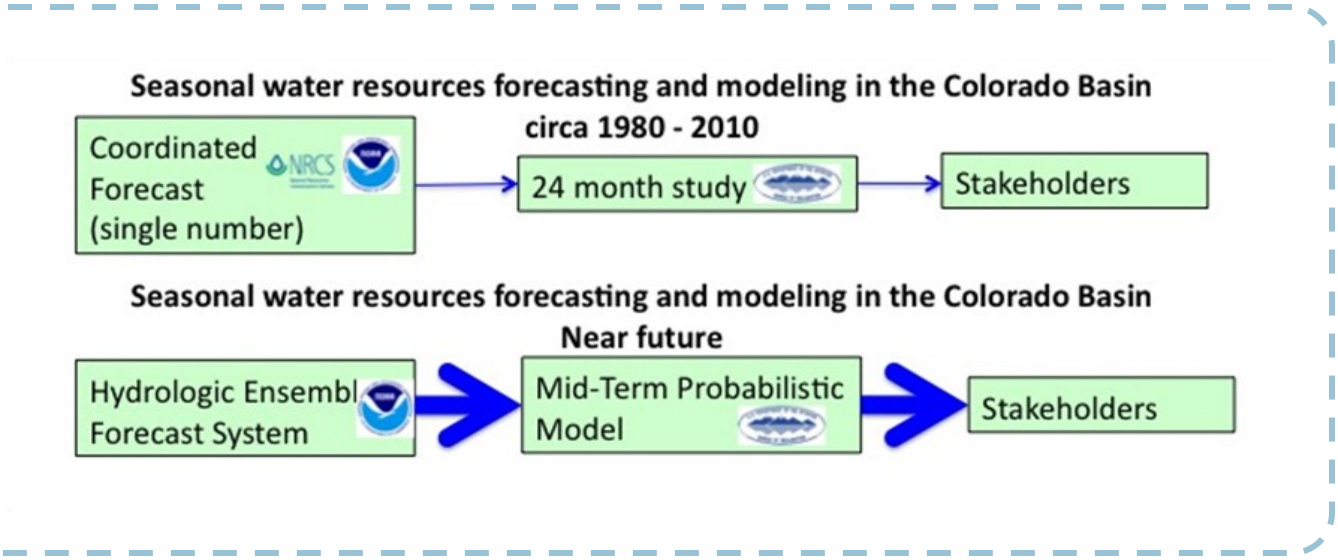
In 2007, the seven basin states agreed on interim guidelines that specify how any shortage would be handled and how the two major reservoirs on the river, Glenn Canyon Dam and Hoover Dam, would be operated. The operating criteria dictate that key decisions on releasing water and declaring water shortages be based on water supply forecasts from the Colorado Basin River Forecast Center (CBRFC) and the Natural Resources Conservation Service (NRCS).

With the heightened interest in forecasts, the CBRFC has worked closely with the US Bureau of Reclamation (USBR) and stakeholders to develop forecast products and analyses to better support the important water management decisions. In particular, the CBRFC is working to connect their Ensemble Streamflow Prediction (ESP) based forecasts with the USBR's developmental mid-term probabilistic model. This combined RFC/USBR modeling framework will produce probabilistic outlooks for both streamflow and reservoir operations enabling stakeholders to make risk based decisions. Forecast probabilities may be used, for example, to assess the chances of a shortage being declared and provide stakeholders the tools they need to appropriately manage that risk. The USBR expects to be running their mid-term probabilistic model within a few months for the Upper Colorado.



Long term water supply (pink) and demand (blue) on the Colorado River. Credit: USBR

In addition to working with USBR, CBRFC is beginning to incorporate both climate and weather forecasts into its forecast process in probabilistic terms through the NWS Hydrologic Ensemble Forecast System. This system leverages the climate forecast system and the global forecast system to produce a range of possible outcomes that can be provided to forecast users. For example, the current dry climate outlooks for the late winter and spring months of 2011 lowered the streamflow forecasts about 5%. Stakeholders have long expressed a desire to see this information brought through, not just the RFC models but also the USBR models so that they can make more informed risk based decisions.



SOO/DOH Calls: Recent DSS/Verification related homework assignment for each office and the recording of the SOO/DOH call can be found at http://ww2.wrh.noaa.gov/ssd/digital_services/calls/ Links to each of the offices reports/presentations that were submitted. They are located at: http://ww2.wrh.noaa.gov/ssd/digital_services/presentations/Jan2011/

iNWS: iNWS continues to work through the NWSH approval process to migrate into the NWS web farm, formerly call the CIF, now called the NOAA Internet Dissemination (NID) as it s final operational location. iNWS currently supports over 10,000 Emergency Managers, police, fire and other government community leaders and agencies. The web site to register can be found at http://inws.wrh.noaa.gov.

iNWS is the only NWS dissemination program to use the warning polygon directly for making dissemination decisions as opposed to the traditional county or zone broadcast approach. This reduces the amount of over-warning, a key NWS goal for implementing the polygon.

AWIPS II: Another field test is occurring at Kansas City and Washington DC during the first few weeks of February. WR sent two representatives to the FIT. The next step is to install the latest AWIPS II version at all of the regional headquarters, then upgrade the ADAM PCs at each office.

Dual Pol: We have no new information about the new deployment schedule. The Norman Radar Operations Center (ROC) is still working with the contractor on the final set of issues. We expect to have an update very soon.

New experimental models from The Office of Atmospheric Research

Flow Following, Finite Volume Icosahedral (FIM): The FIM is an global model with three unique design features:

- Icosahedral horizontal grid, mostly hexagons except for 12 pentagons ("I" in FIM). A example can be found at http://fim.noaa.gov/tk2.png
- Isentropic-sigma hybrid vertical coordinate, adaptive, concentrates around frontal zones, tropopause, similar to RUC model ("F" for Flow-following in FIM)
- Finite-volume horizontal transport (Also under "F", for "finite-volume" in FIM)

To access the various versions of the FIM models -- http://fim.noaa.gov/

High-Resolution Rapid Refresh (HRRR): The HRRR is a 3-km resolution, hourly updated, cloud-resolving atmospheric model that uses:

- A configuration of the WRF model, similar to that used for the Rapid Refresh (ARW core, Thompson microphysics, RUC-Smirnova land-surface model, etc., as defined here), but without any convective parameterization.
- Initialized with latest 3-d radar reflectivity via 13km backup RUC at ESRL/GSD, which includes radar reflectivity assimilation via its radar-DFI (digital filter initialization) technique.
- Cycled chemistry variables, including 3-d ozone, PM 10 aerosol, PM 2.5 aerosol

The HRRR is the only hourly updated, radar-initialized, storm-resolving model running at this time over the US (or internationally).

To access the HRRR, http://rapidrefresh.noaa.gov/hrrrconus/

Training News

WDTB Enhanced Weather Event Simulator for Realistic Decision Support Services Training: As part of a collaborative training project with COMET®, WDTB instruction developers have integrated artificial intelligence capabilities into the NWS training simulations. The first training to have this capability will be HYSPLIT training for forecasters scheduled for a Spring 2011 release. In this simulation, forecasters will be tasked to support government decision makers using the HYSPLIT output. While providing training in dispersion science and model technology, the simulation will take the forecaster through different operationally representative challenges based upon how the forecasters respond to decision support questions.

New Weather Event Simulators Deployed to all CWSUs: WDTB deployed 28 new virtual Weather Event Simulators (WESs) to CWSUs and Regional Headquarters in December 2010. The new WES uses virtualization technology which allows the training workstation to link with either Linux workstations (e.g. an AWIPS Remote Display) or Windows workstations (e.g. administration PCs). The simulators were shipped with 15 different simulations covering radar and mesoscale meteorology training. This new training capability means CWSU meteorologists no longer have to travel to distant WFOs and can now accomplish required training simulations at their center.

New COMET Courses and Modules: In support of the FY11 Implementation Plan for Training and Education, the following modules and courses were delivered by COMET, VISIT, and FDTB in the first quarter:

- Adding Value to NWP Guidance
- Avalanche Weather Forecasting
- Distributed Hydrologic Models for Flow Forecasts - Part 2
- Fog: Its Processes and Impacts to Aviation and Aviation Forecasting
- Tsunami Warning Systems
- Tsunami Training Module
- COMAP Virtual Symposium on QPF/Rapid Onset Floods (Completes FY11 Milestone)
- How Numerical Weather Prediction (NWP) Fits into the Forecast Process
- Downscaling of NWP Data
- Arctic Ecosystems
- Forecasting Dust Storms - Version 2
- Introduction to Tropical Meteorology, Chapter 1: Introduction
- Techniques in Hydrologic Forecast Verification
- Volcanoes and Volcanic Ash Part 1

Training News Continued

IS-100 (Incident Command System) and ISS-700 (NIMS Introduction) Training: There have been a number of questions about the ICS courses: OCWSS has released the official interim guidance and posted on the NDS page just under 10-405 entitled "Updated Guidance on Incident Command System Training Requirements." http://www.weather.gov/directives/010/010.htm

Q1: Per the updated guidance provided in 10-405, how soon do I have to complete ICS-100 and ICS-700?

A1: 10-405 does not specify when these courses must be completed, so it is up to your regions and MICs to make that determination. FEMA is in the process of changing their on-line registration process for students and expects it to be available in late spring 2011. Completion of these courses may be delayed until the new FEMA system is operational. See answer to Q2 below.

Q2: I took the FEMA training. When completing the final exam, it asked me for my social security number. I don't want to provide this information on-line. What can I do?

A2: You will not need to provide Personally Identifiable Information (PII) to complete this training requirement. With this in mind, you may use the following options:

FEMA has indicated that the modification to their student registration system) will be completed by late spring, 2011. This new system will not require PII in order to register for the IS-100 and IS-700 courses. So, you may wait until this new system becomes operational if you desire a FEMA certificate indicating course completion and passing of the exam. However, you may go through the courses sooner on the current site to become familiar with the materials and simply wait to take the final exam until the new system is in place. NWSH will inform the Regions when FEMA has instituted the new system.

For IS-100 ONLY, another possibility is to take the course through the National Wildfire Coordinating Group (NWCG) website at http://training.nwcg.gov/courses/i100.html. You will be able to get a course completion certificate from this site by providing only your name and the date you took the test. This particular course is built on the same lesson objectives and content as the FEMA IS-100 and is considered interchangeable and NIMS compliant. As a result, completion of this version of IS-100 will suffice as completion of the IS-100 course requirement of 10-405 and can be considered official as a prerequisite for higher level courses.

As a note, NWCG does not offer any other courses on-line such as IS-200, IS-700 or IS-800.

Related Links:

http://www.fema.gov/emergency/nims/

http://www.fema.gov/emergency/nims/NIMSTrainingCourses.shtm

http://training.fema.gov/IS/isfaqdetails.asp?id=4&cat=General Questions

Length of Service Awards

Legard, Patricia	WFO Billings, MT	Administrative Support Assistant	5 Years
Chaisson, James	WFO Great Falls, MT	Facilities Engineering Technician	5 Years
Bos, Paul	WFO Spokane, WA	Lead Forecaster	20 Years
Bagnall, James	WFO Hanford, CA	Lead Forecaster	20 Years

New Hires in Western Region for January

Wright, Thomas	WFO Medford, OR	Lead Forecaster
Boyde, Brian	WFO Elko, NV	Lead Forecaster
Felsch, Peter	CWSU Palmdale, CA	MIC

Personnel Departing Western Region in January

Hanko, Kerry	WFO Pocatello, ID	General Forecaster	Transferred to WFO Sioux Falls, SD
Burger, Mark	WFO Eureka, CA	Lead Forecaster	Transferred to Kansas City
Wheeler, Debra	WFO Great Falls, MT	Administrative Support Assistant	Resigned to return to school
Nix, Janet	WRH/AMD Salt Lake City, UT	Budget Analyst	Transferred to PRH Honolulu, HI

Please send newsletter submissions to:
matt.ocana@noaa.gov and levi.wilmert@noaa.gov
by the **25th** of every month.